

Listing of Claims

The following listing of claims will replace all prior versions, and listings, of claims in the subject application:

Claims 1-86 (canceled).

87. (new) A bulk crystal substrate of GaN comprising:
a slab of GaN single crystal having a substantially uniform composition of GaN in a thickness direction of said slab, said GaN single crystal slab being produced by a process comprising the steps of:

forming a molten flux of a volatile metal element in a pressurized reaction vessel confining therein said molten flux together with an atmosphere containing N (nitrogen), such that said molten flux includes Ga in addition to said volatile metal element;

growing GaN in the form of a single crystal body in said molten flux; and
supplying a compound containing N directly into the atmosphere in said reaction vessel from a source located outside said reaction vessel.

88. (new) A bulk crystal substrate of GaN as claimed in claim 87, wherein said slab has a thickness exceeding about 100 μm .

89. (new) A bulk crystal substrate of GaN as claimed in claim 87 wherein said slab has a thickness exceeding about 300 μm .

90. (new) A bulk crystal substrate of GaN as claimed in claim 87, wherein said slab is

formed of GaN of a hexagonal crystal system.

91. (new) A bulk crystal substrate of GaN as claimed in claim 87, wherein said slab is formed of GaN of a cubic crystal system.

92. (new) The bulk crystal substrate of GaN as claimed in claim 87, wherein said slab has a thickness exceeding 10 μm .

93. (new) The bulk crystal substrate of GaN as claimed in claim 87, wherein a cathode luminescent spectrum of said slab of GaN single crystal has no more than one peak.